Operating Instructions
Air Top Evo 3900
Air Top Evo 5500

Servicing and safety instructions

1. The **Air Top Evo 3900 / Air Top Evo 5500** heaters have been type-tested and approved in accordance with Directives ECE R10 and 72/245/EEC (EMC) and ECE R122 and 2001/56/EC (heater) with the following EC permit numbers:

e1*72/245*2006/96*5529	(Air Top Evo 3900 / 5500)
E1 03 5529	(Air Top Evo 3900 / 5500)
e1*2001/56*2006/119*0255	(Air Top Evo 3900)
E1 00 0255	(Air Top Evo 3900)
e1*2001/56*2006/119*0256	(Air Top Evo 5500)
E1 00 0256	(Air Top Evo 5500)

   NOTE:
   The specifications of this Directives are binding in the scope of the basic Directives EEC/70/156 and/or EC/2007/46 (for new vehicle models from 29/04/2009) and should also be observed in countries in which no special regulations exist.

2. The year in which the heater was used for the first time must be permanently displayed on the factory plate by deleting the inapplicable years from the plate.

3. **The heaters are not designed for heating hazardous substance transport compartments.**

   To install the Air Top Evo 3900 / 5500 heater unit in hazchem vehicles, the requirements of the Directives EC/2001/56 and ECE R122 must be met.

4. Claims can only be made if it can be verified that the claimant has complied with the servicing and safety instructions.

5. **The heater must be switched off at filling stations and tank farms as a result of the risk of explosion.**

6. **The heater may not be operated in enclosed spaces (such as garages) as a result of the risk of poisoning and asphyxiation, even if a timer or Telestart remote is used.**

7. The heater must be checked by an expert at the latest at the start of the cold weather period.

8. In the event of long-lasting heavy smoke development, unusual combustion noises or a smell of fuel or if the heater suffers continuous fault cut-outs with error messages (flashing code), it must be shut down by removing the fuse and must not be reused until it has been inspected by Webasto-trained personnel.

9. **Wherever inflammable vapours or dust may form (for example in the vicinity of fuel, carbon, wood dust or cereal stores or the like), the heater must be switched off as a result of the risk of explosion.**

Servicing and safety instructions

10. **The heat transfer unit on air heaters is exposed to very high thermal stress and must be replaced by a genuine Webasto spare part ten years after it is used for the first time.**

    If exhaust lines pass through areas used by personnel, they must also be replaced by genuine spare parts after ten years.

11. The fuel specified by the vehicle manufacturer is suitable for use in the Air Top Evo 3900 B/Air Top Evo 5500 B. Both leaded and unleaded fuel may be used.

    The diesel fuel specified by the vehicle manufacturer is suitable for use in the Air Top Evo 3900 D/Air Top Evo 5500 D. Class EL heating oil (not L heating oil) may also be used as long as it complies to the normal quality available on the German market pursuant to DIN 51603.

    The Air Top Evo 3900 D/Air Top Evo 5500 D heaters are also licensed for use with PME (bio-diesel), which complies with DIN EN 14214.

    We know of no negative influences due to additives.

    If fuel is extracted from the vehicle's tank, follow the additive instructions issued by the vehicle manufacturer.

    If you change to low-temperature fuel, the heater must be operated for approx. 15 minutes so that the fuel system is filled with the new fuel.

12. The temperature in the area around the heater unit must not exceed 85 °C (storage temperature). If the temperature exceeds this level there is a risk of permanent damage to the electronics systems.

13. Non-compliance with the installation instructions and the warnings contained therein will lead to the exclusion of all liability by Webasto. The same applies if repairs are carried out incorrectly or with the use of parts other than genuine spare parts. This will result in the invalidation of the type approval for the heater unit, and therefore of its homologation/ EC type licence.

14. Keep the hot air inlet and hot air outlet free of dirt and foreign bodies. Soiled or blocked hot air lines may cause overheating, and therefore result in the overheating cut-out tripping.

15. To prevent mechanical parts seizing, the heater should be operated for approx. 10 minutes every four weeks.

16. Do not stand on the heater and do not place any heavy items on the heater or throw items at the heater.

17. Do not place any items of clothing, textiles or similar materials over the heater or in front of the hot air inlet and the hot air outlet.

18. The current of hot air in the heater must not be restricted or blocked by highly inflammable substances or materials such as rags, cleaning wool, etc.

19. The heater must not be cleaned with a high pressure cleaner.

Control element

Changes to the settings on the control element will be carried out with a time delay

Rotary knob for:
- Switching on and off
- Setting the room temperature
- Resetting after a fault cut-out

Indicator/error code display

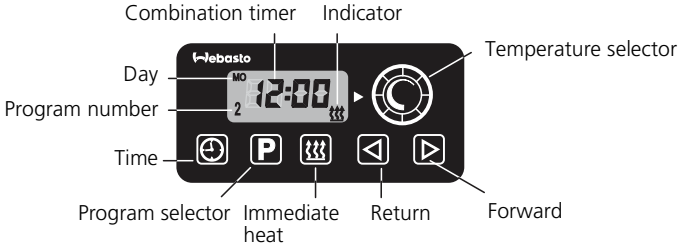
Switch on

Set the rotary knob on the control element to the desired temperature.

Note:
To prevent the hot and combustion air fan from blocking or scraping, ensure that there are no objects on or against the heater before you switch it on.

NOTE for ADR mode only:
The Air Top Evo 3900 ST and Air Top Evo 5500 heater units are switched on and off manually using a switch. The use of automatic control systems is prohibited.
In class FL vehicles these heaters must not be used during loading and unloading procedures or at loading points.
In class FL vehicles the heaters are switched off automatically and the combustion air supply is interrupted for a maximum of 40 seconds if:
-The vehicle's engine is at a standstill; in this case the heater can be switched on again by hand.
-A pumping device that is part of the vehicle is started.
The control unit is then in fault lock-out mode. The ON/OFF switch must be set to OFF before the heater can be restarted.

Combination timer



General information	The combination timer allows the heater start time to be selected for a period of up to seven days. Three cut-in times can be programmed, although only one of them may be activated. The combination timer has a temperature setpoint generator. When the ignition is switched on the timer shows the current time and the day. When the heater is operating, the display and the buttons are lit. When the timer is connected to the power supply all the symbols in the display will flash. The time and day must be set. The display remains blank in ADR vehicles.
Operation	The operation of the timer is designed such that all the flashing symbols can be adjusted using the ◀ and ▶ buttons. If no button is pressed for five seconds the displayed time is saved. If the ◀ and ▶ buttons are pressed for longer than two seconds, they will switch to high speed adjustment. If the ignition is switched off whilst the heater is in permanent heating mode, a remaining operating time of 15 minutes will appear on the display and the heater will continue to operate.
Error code	On heaters that output an error code(Air Top Evo 3900/Air Top Evo 5500), a number, the error code, may appear in the display. In this case you should visit a Webasto service outlet.
Switch on	Manual: Press the button (continuous heating mode) Automatic: By programming the start time

Switch off	Manual: Press the button again Automatic: By programming the operating period When heater unit is running: By setting the remaining time
Set time/date	Press the button for more than two seconds - the time flashes - set the time using the and buttons - the day flashes - set the day.
View time	Ignition off: Press button
Program start time	Press the P button - program number flashes - set the start time using the and buttons - the day flashes - set the day. If you press the P button several times, you can set the program numbers 2 and 3 or go to the time mode.
View/Delete selected times	Press the P button several times until the required program number is displayed. To delete the selected time press the P button until the time is displayed with no program numbers.
Program operating time	The heater must be switched off. Press the button for three seconds - the operating duration flashes - set the required operating duration using the and buttons (10 to 120 minutes).
Set remaining time	Set the required remaining time (1 to 120 minutes) using the and buttons. The remaining time is the time that the heater will continue to operate. It can only be changed whilst the heater is operating and the ignition is off.
Remote control	Possible using an external optional immediate heat button.
Vehicles with ADR equipment	It is not possible to set a time on ADR vehicles. The remaining time will be shown on the display whilst the heater is operating. The time can be adjusted.

Control Panel Air Top Evo MC04/05

General information

Using the Control Panel Air Top Evo MC04/05, you can select the functions of the Webasto air heaters Air Top Evo.

Eco	Eco	Economy mode
	Normal	Comfort heating
Plus	Plus	Fast heating
	Fan	Fan
	Altitude	Altitude correction (not available for MC04 M and MC04 SPM)

The control panel is to switch on/off, as well as to preselect the operation modes and the interior temperature. For technical data as well as references to the installation, see the installation instructions of the specific heater.

Operation

Main switch ON / OFF

Switching on the heater

By pressing the main switch ON / OFF the heater is activated. After switching on, the main switch illuminates and the indicator "ON / Status" lights to confirm the heater operation.

Switching off the heater

By pressing the main switch ON / OFF again the heater operation is stopped.

After switching off, the lighting of the main switch is also off.

The indicator "ON / Status" goes off after approx. 3 minutes (cooling down of the heater).

Mode selector knob

With the mode selector knob you can select the desired functions of your heater by placing the index on the desired symbol.

Temperature selector

You can adjust the desired interior temperature with the temperature selector. Preferably the temperature selector should be in the marked range of the scale (comfort range).

Remote control

In 12V applications, there is the possibility to combine control panel and heater with an optional Webasto Telestart or ThermoCall.

Telestart T91

Telestart T100 HTM

Thermo Call

Error code

Faultless operation:
The normal operation of the equipment is represented by the status indicator, illuminating green light.
After switching off the heater (main switch) the status indicator shows the normal cooling down process of the heater. After the heater has cooled down normally, the status indicator shuts off.

Fault:
During an operational fault a flashing code is displayed by the status indicator. This function enables a professional workshop to solve the fault in a fast way. In this case please visit a Webasto service station!

Actions in event of faults

If an error occurs, first check the fuse and plug connections to ensure that they are in proper condition and connected correctly.
If the actions described below do not rectify the error, have the heater checked by Webasto-trained personnel.

Heater unit cuts out automatically

Cause	Remedy
No combustion after start and repeat start	Switch heater unit off (for at least 2 seconds) and then on again
Flame extinguishes during operation	Switch heater unit off (for at least 2 seconds) and then on again
Heater unit overheats and indicator flashes	Make sure that hot air can flow freely, allow heater unit to cool down, Switch heater unit off (for at least 2 seconds) and then on again
Vehicle voltage too low	Charge battery Switch heater unit off (for at least 2 seconds) and then on again

Heater unit emits black smoke

Cause	Remedy
Combustion air and/or exhaust system blocked	Check combustion air and exhaust system for blockage

NOTE for ADR mode only:
After an ADR cut-out or the application of operating voltage by switching on the main vehicle switch and setting the control element to "ON" the control unit will be set to the "Fault cut-out" position.
Before the heater can be restarted the control element must be set to "OFF" or the immediate heat button on the combination or standard timer must be pressed.

Error code output on combination timer or control element

If the system is fitted with a combination timer, when an error occurs an error code is output on the timer's display until the heater has been rectified.

The error code is output if the heater is fitted with a control element after an error has occurred by the switch-on indicator/error code indicator flashing. After a burst of fast flashes the error code will be output by a sequence of long flashes, the number of which is shown in the table below.

Error code	Meaning
F 00	Control unit error
F 01	No start (after 2 starting attempts)
F 02	Flame failure (at least > 3)
F 03	Undervoltage or overvoltage
F 04	Premature flame recognition
F 06	Temperature sensor interrupt or temperature sensor short circuit
F 07	Metering pump interrupt or metering pump short circuit
F 08	Fan motor interrupt or fan motor short circuit or fan motor overload or blocked
F 09	Glow plug interrupt or glow plug short circuit
F 10	Overheating
F 11	Overheating sensor interrupt or overheating sensor short circuit
F 12	Heater unit lock-out
F 14	Overheating sensor installed incorrectly
F 15	Setpoint generator short circuit

If serious faults, such as overheating or no start, occur frequently, the heater will be set to permanent fault lock-out (F 12) and cannot be restarted until it has been repaired by Webasto-trained personnel.

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